

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1. (Currently Amended) A system for managing a mobility service in Internet protocol networks, comprising:

a gateway means for managing interfacing with Internet and location information of a mobile host;

a transfer means with a plurality of ~~hierarchical~~ nodes and a switching function, for connecting the gateway means with the mobile host, where each of the nodes includes a plurality of base stations and where the plurality of nodes are arranged such that there is a hierarchical structure between the plurality of nodes; and

a storage means for storing the location information of the mobile host.

2. (Original) The system as recited in claim 1, wherein the gateway means manages the interfacing with Internet and the storage means for managing the location information of the mobile host, and adds additional header data to packet data received for the data transmission to the mobile host, wherein the additional header data represents the location information of the mobile host.

3. (Original) The system as recited in claim 2, wherein the transfer means having the plurality of hierarchical nodes and the switching function periodically broadcasts domain identification and an identification of a base station through a beacon.

4. (Original) The system as recited in claim 2, wherein the mobile host interfaces with the base station via a wireless network, transmits location registration message to the base station when the mobile host enters into a new domain, and transmits location update message when it moves to a new node within the domain.

5. (Currently Amended) A method for managing a mobility service in internet protocol networks, the method comprising:

(a) receiving a location registration message or a location update message, which is generated responsive to a movement of a mobile host, through a node ~~having a hierarchical architecture~~, wherein the node are arranged such that there is a hierarchical structure between the node and a plurality of other nodes;

(b) storing the received location registration message or the received location update message in a database; and

(c) transferring a packet to the location of the mobile host contained in the location registration message or the location update message, through the node having the hierarchical architecture.

6. (Previously Presented) The method as recited in claim 5, wherein the location registration message or the location update message includes an identification of a user and an identification of the base station in which the user is located.

7. (Currently Amended) A computer-readable medium storing a program, in a mobility management system with a mass storage processor, for implementing the functions of:

receiving location registration message or location update message, which are generated responsive to the movement of a mobile host, through a node ~~having a hierarchical architecture~~, wherein the node are arranged such that there is a hierarchical structure between the node and a plurality of other nodes;

storing the received location registration message or the received location update message in a database; and

transferring a packet to the location of the mobile host contained in the location registration message or the location update message, through the node having the hierarchical architecture.

8. (Previously Presented) The method as recited in claim 7, wherein the location registration message or the location update message includes an identification of a user and an identification of the base station in which the user is located.